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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/510,541	10/07/2004	Anne M Bonner	BOV-4173/BO-3984	8480

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EXAMINER

SHAKERI, HADI

ART UNIT	PAPER NUMBER
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3723

DATE MAILED: 09/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/510,541

Applicant(s)

BONNER ET AL.

Examiner

Hadi Shakeri

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>20041007</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Specification

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 9-11, 15-27 and 32-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. The term "softer than that of an otherwise identical conventional tool" in claim 9 is a relative term which renders the claim indefinite. The term "conventional tool" is not defined by the claim. The range for the hardness grade of the tool must be recited or lines 3-6 should be deleted.

5. Claim 10 recites the limitation "the inorganic bond material" in line 1. There is insufficient antecedent basis for this limitation in the claim.

6. Regarding claim 11, the language as written renders the claim indefinite for making the scope unascertainable. The claim recites for 10-100 vol % of the abrasive to be agglomerated together with an inorganic binder and with an organic binder. Is Applicant claiming, e.g., 100% of abrasive comprising inorganic binder and organic binder? Either organic or inorganic binder or some organic and some inorganic (in which case cannot include 100%)? The scope needs to be clearly defined.

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7. Claims 15-27 and 32-35 are indefinite because claim 15 recites for a limitation of the tool to be lower than a conventional tool without setting the boundaries for the limitation. Lines 7-9, recite for the tool to have at least 10% lower elastic modulus than that of otherwise conventional tool, rendering the claim indefinite. The range for the elastic modulus must be recited. Same rejection applies to the associated method claim 32.
8. Claims 23 and 24 are further indefinite for the same reason stated above for the parent claim 15.
9. Claim 25 is indefinite for reciting a range for the abrasive grains outside the range recited for the parent claim 15, it is not further narrowing the range of the grains for the parent, rather a different range.
10. Claim 26 is indefinite for reciting a range for the abrasive grains outside the range recited for the parent claim 15, it is not further narrowing the range of the grains for the parent, rather a different range.

While the Examiner might speculate as to what is meant by the claim language, the uncertainty provides the Examiner with no proper basis for making the comparison between that which is claimed and the prior art. Rejections under 35 U.S.C. § 103 should not be based upon considerable speculation as to the meaning of terms employed and assumptions as to the scope of the claims. *In re Steele*, 134 USPQ 292. When no reasonably definite meaning can be ascribed to certain terms in a claim, the subject matter does not become obvious, but rather the claim becomes indefinite. *In re Wilson*, 165 USPQ 494. **No art applied to claims 15-27 and 32-35 in view of the above 112 rejections.**

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. Claims 1-7, 9-14 and 28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adefris (6,702,650).

Adefris meets all of the limitations of claims 1 and 28, i.e., an abrasive tool comprising three-dimensional composite including a first phase comprising 15-85 % abrasive particles, organic bond, e.g., phenolics, less than 10% pore, e.g., 5% 08:26; and a second phase comprising 30-60 % pores, e.g., 12:27; except for disclosing the specific ranges and the burst speed of 4000 sfpm. With regards to the particular ranges, Adefris discloses ranges overlapping the claimed invention and choosing a value meeting the range recited, would have obvious to one of ordinary skill in the art, depending on the workpiece/operational parameters, and since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

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Adefris is silent regarding the burst speed, however, burst speed depends on several parameters, e.g., elastic modulus, mechanical strength...and although higher burst speed, e.g., minimum 150 m/s is desired to comply with safety standards, choosing a low burst speed, e.g., 4000, for an operation requiring low wheel rotational speed, e.g., 4000-8000 sfpm, by adjusting physical properties would have been obvious to one of ordinary skill in the art.

Regarding claims 2-7, 9-14 and 8-31, Adefris as modified above meets the limitations, i.e., adjusting/choosing specific values/material for a particular operation, depending on the workpiece/operational parameters.

Double Patenting

13. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

14. Claims 1-14 and 28-31 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-18 of U.S. Patent No. 7,090,565.

Although the conflicting claims are not identical, they are not patentably distinct from each other because as indicated above, where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

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Allowable Subject Matter

15. Claim 8 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims and if double patenting rejection is overcome.

16. The following is a statement of reasons for the indication of allowable subject matter: while adjusting parameters, e.g., burst speed, to meet conditions for certain operations/workpieces are considered obvious, modifying prior art for a particular elastic modulus and for a particular burst speed is considered hindsight.

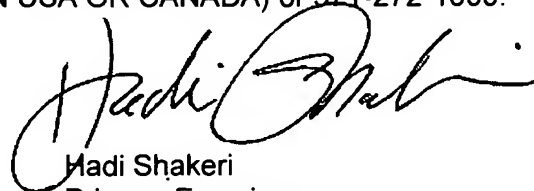
Conclusion

17. Prior art made of record and not relied upon at this time, are considered pertinent to applicant's disclosure. Kuramochi et al., Ramanath et al., Sigalas et al. and Frushour are cited to show related inventions.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hadi Shakeri whose telephone number is 571-272-4495. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph J. Hail, III can be reached on 571-272-4485. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Hadi Shakeri
Primary Examiner
Art Unit 3723

August 31, 2006